



C O N T E N T S

CHAPTER 1: EIGHT YEARS OF RECOVERY AND REINVESTMENT . . .	21
THE RECOVERY IN REVIEW	22
<i>Employment and Wages</i>	22
<i>Output and Economic Growth</i>	25
<i>Equity Markets, House Prices, Household Wealth, and Other Measures</i>	26
THE CRISIS AND THE RESPONSE	28
<i>A Once-in-a-Lifetime Crisis</i>	28
<i>The Policy Response</i>	30
THE 2017 ECONOMIC REPORT OF THE PRESIDENT : PROMOTING STRONGER, MORE INCLUSIVE, AND MORE SUSTAINABLE GROWTH	43
<i>Chapter 3: Reducing Inequality</i>	43
<i>Chapter 4: Reforming the Health Care System</i>	45
<i>Chapter 5: Investing in Higher Education</i>	47
<i>Chapter 6: Strengthening the Financial System</i>	51
<i>Chapter 7: Addressing Climate Change</i>	53
FOUR CONTINUED STRUCTURAL CHALLENGES: PRODUCTIVITY, INEQUALITY, PARTICIPATION, AND SUSTAINABILITY	57
<i>Productivity Growth</i>	58
<i>Income Inequality</i>	59
<i>Labor Force Participation</i>	61
<i>Economic Sustainability</i>	61
CONCLUSION	63
CHAPTER 2: THE YEAR IN REVIEW AND THE YEARS AHEAD	65
POLICY DEVELOPMENTS	68
<i>Fiscal Policy</i>	68
<i>Monetary Policy</i>	70
LABOR MARKET	76
OUTPUT	85
<i>Consumer Spending</i>	85
<i>Housing Markets</i>	98
<i>Investment</i>	104
<i>Net Exports</i>	108
PRODUCTIVITY	113
WAGE AND PRICE INFLATION	122
FINANCIAL MARKETS	125
<i>Equity Markets</i>	126
<i>Interest Rates and Credit Spreads</i>	127
<i>Energy Prices</i>	130
THE GLOBAL MACROECONOMIC SITUATION	130
<i>Global Headwinds and Trade</i>	132
<i>Developments in 2016</i>	134
THE OUTLOOK	140

GDP Growth over the Next Three Years	140
GDP Growth over the Long Term	143
CONCLUSION	149
CHAPTER 3: PROGRESS REDUCING INEQUALITY	151
THE RECOVERY ACT: RESTORING GROWTH	156
<i>Reducing Unemployment and Earnings Inequality</i>	<i>158</i>
<i>Supporting Struggling Families</i>	<i>162</i>
THE AFFORDABLE CARE ACT: PROVIDING AFFORDABLE, ACCESSIBLE HEALTH INSURANCE	165
<i>Reducing Disparities in Health Coverage and Health Status</i>	<i>166</i>
<i>Reducing Poverty and Income Inequality</i>	<i>170</i>
ENACTING A FAIRER TAX CODE	171
<i>Cutting Taxes to Support Work, Reduce Poverty, and Strengthen Opportunity</i>	<i>171</i>
<i>Restoring Tax Rates to Their Level in the 1990s and Increasing Progressivity</i>	<i>174</i>
<i>Reducing Poverty and Income Inequality</i>	<i>175</i>
THE OBAMA ADMINISTRATION'S RECORD IN HISTORICAL CONTEXT	177
<i>The Combined Impact of Changes in Tax Policy and the ACA Coverage Provisions</i>	<i>177</i>
<i>Obama Administration Achievements Relative to Other Federal Action in Recent Decades</i>	<i>183</i>
<i>A Partial Reversal of Increasing Inequality</i>	<i>187</i>
NEXT STEPS TO FURTHER BOOST INCOMES, EXPAND OPPORTUNITY, AND REDUCE INEQUALITY	188
<i>Making Work Pay</i>	<i>189</i>
<i>Investing in Children and Families</i>	<i>189</i>
<i>Reforming the Tax System</i>	<i>191</i>
CONCLUSION	192
APPENDIX: DISTRIBUTION OF CHANGES IN TAX POLICY SINCE 2009 AND ACA COVERAGE PROVISIONS	193
CHAPTER 4: REFORMING THE HEALTH CARE SYSTEM	195
INTRODUCTION	195
EXPANDING AND IMPROVING HEALTH INSURANCE COVERAGE	199
<i>Barriers to Obtaining Health Insurance Coverage Before the Obama Administration</i>	<i>200</i>
<i>Reforms to Expand Health Insurance Coverage</i>	<i>206</i>
<i>Economic Consequences of Broader Health Insurance Coverage</i>	<i>223</i>
REFORMING THE HEALTH CARE DELIVERY SYSTEM	243
<i>Health Care Costs and Quality Before the Affordable Care Act</i>	<i>243</i>
<i>Reforms to the Health Care Delivery System Under the Obama Administration</i>	<i>247</i>
<i>Recent Trends in Health Care Costs and Quality</i>	<i>261</i>
<i>Economic Benefits of a Better Health Care Delivery System</i>	<i>289</i>
CONCLUSION	298
CHAPTER 5: INVESTING IN HIGHER EDUCATION	299
INTRODUCTION	299

THE ECONOMIC RATIONALE FOR FEDERAL POLICIES AND REFORMS TO SUPPORT HIGHER EDUCATION	301
<i>Individual Returns to Higher Education</i>	302
<i>Positive Externalities</i>	305
<i>Credit Constraints</i>	305
<i>Information Failures and Procedural Complexities</i>	308
<i>The Role of Family Income</i>	310
KEY ACCOMPLISHMENTS	312
<i>Helping Students Pay for College</i>	313
<i>Reducing Credit Constraints and Improving Student Debt Outcomes</i>	321
<i>Improving Information and Reducing Procedural Complexities</i>	331
<i>Protecting Students from Low-Quality Programs and Encouraging Schools to Improve</i>	341
NEXT STEPS	346
CONCLUSION	348
CHAPTER 6: STRENGTHENING THE FINANCIAL SYSTEM	349
INTRODUCTION	349
ECONOMIC RATIONALE FOR REGULATING FINANCIAL MARKETS	350
U.S. FINANCIAL MARKETS IN 2007-08	361
IMPACT OF REFORMS TO ESTABLISH A MORE SUSTAINABLE FINANCIAL SYSTEM	367
<i>Increasing the Safety and Soundness of Individual Financial Institutions</i>	369
<i>Systemic Risk and Identifying Sources of Risk in the System</i>	384
<i>Transparency, Accountability, and Protecting Consumers and Investors</i>	398
<i>International Cooperation</i>	412
U.S. FINANCIAL MARKETS IN 2016	414
<i>General Measures of Financial Sector Health</i>	416
CONCLUSION	420
CHAPTER 7: ADDRESSING CLIMATE CHANGE	423
INTRODUCTION	423
THE ECONOMIC RATIONALE FOR CLIMATE ACTION	426
<i>Addressing Externalities</i>	429
<i>Correcting Other Market Failures</i>	429
<i>Insurance against Catastrophe</i>	430
<i>Delaying Action on Climate Change Increases Costs</i>	432
ADMINISTRATION CLIMATE POLICIES	432
<i>Supporting Growth of Renewable Energy</i>	434
<i>Carbon Pollution Standards for Power Plants</i>	436
<i>Improving Energy Efficiency and Conservation</i>	438
<i>Addressing Transportation Sector Emissions</i>	441
<i>Reducing Emissions from High Potency Greenhouse Gases</i>	445
<i>Promoting Climate Resilience</i>	448

PROGRESS TO-DATE IN TRANSITIONING TO A CLEAN ENERGY ECONOMY.....	449
<i>Reduced Growth in Greenhouse Gas Emissions</i>	449
<i>Declining Energy Intensity</i>	450
<i>Declining Carbon Intensity</i>	455
<i>Decomposition of the Unexpected and Total Declines in Emissions</i>	466
HOW ADMINISTRATION POLICIES MEET FUTURE EMISSIONS REDUCTIONS TARGETS	471
AMERICAN LEADERSHIP IN INTERNATIONAL COOPERATION	474
PLANS FOR THE FUTURE	477
CONCLUSION.....	482
APPENDIX: DETAIL ON SECTORAL EMISSIONS DECOMPOSITION ANALYSIS.....	483
REFERENCES.....	485

APPENDIXES

A.	Report to the President on the Activities of the Council of Economic Advisers During 2016	545
B.	Statistical Tables Relating to Income, Employment, and Production	559

FIGURES

1.1	Actual and Consensus Forecast Unemployment Rate, 2008-2020	23
1.2	Private-Sector Payroll Employment Growth, 2008-2016	24
1.3	Real Hourly Wage Growth Over Business Cycles, Cycle Peak to Cycle Peak.....	25
1.4	Real GDP per Capita: Euro Area, United States, and Japan, 2007-2016	27
1.5	National House Price Indexes, 2000-2016	27
1.6	Household Net Worth in the Great Depression and Great Recession.....	29
1.7	Civilian Employment in the Great Depression and Great Recession.....	30
1.8	Global Trade Flows in the Great Depression and Great Recession	31
1.9	Fiscal Expansion as Share of GDP, 2009-2012.....	35
1.i.	Manufacturing Output and Employment, 1980-2016	38
1.ii.	U.S. Manufactured Goods Exports as a Share of World Manufactured Goods Exports, 1980-2015	40
1.10a.	Quarterly Effect of the Recovery Act and Subsequent Fiscal Measures on Employment, 2009-2012	42
1.10b.	Quarterly Effect of the Recovery Act and Subsequent Fiscal Measures on GDP, 2009-2012.....	42
1.11.	Change in Share of After-Tax Income by Income Percentile: Changes in Tax Policy Since 2009 and ACA Coverage Provisions, 2017.....	44
1.12.	Growth in Real Costs for Employer-Based Family Coverage, 2000-2016	46
1.iii.	Utility Patent Applications and Grants, 1963-2015.....	50
1.13.	Borrowers in Income Driven Repayment Over Time.....	51
1.14.	Tier 1 Common Equity Ratios for U.S. Banks by Bank Size, 2001-2016.....	52
1.15.	Decomposition of Total CO2 Emission Reductions, 2008-2015.....	54
1.16.	Labor Productivity Growth, G-7 Countries	59
1.17.	Share of Income Earned by Top 1 Percent, 1975-2015.....	60
1.18a.	Prime-Age Male Labor Force Participation Rate, 1948-2016	62
1.18b.	Prime-Age Female Labor Force Participation Rate, 1948-2016	62
1.19.	U.S. Net Emissions, 1990-2025.....	64
2.1.	Unemployment Rate, 1975-2016	67
2.2.	Real Hourly Wages, 1980-2016.....	67
2.3.	Quarterly Contribution of Government Purchases to Real GDP Growth, 2012-2016.....	71

2.4.	Government Purchases as Share of Nominal GDP, 1948-2016.	71
2.i.	Real State and Local Government Purchases During Recoveries, 1960-2016.	72
2.ii.	Real State and Local Consumption, Investment, and Employment, 1955-2016.	73
2.iii.	State and Local Government Surplus as Percent of Nominal GDP, 1950-2016.	74
2.5.	Private-Sector Payroll Employment, 2008-2016.	77
2.iv.	Oil Prices and Mining Employment, 2000-2016.	78
2.6.	Actual and Consensus Forecast Unemployment Rate, 2008-2020.	80
2.7.	Unemployment Rate by Duration, 1990-2016.	80
2.8.	Rates of Part-Time Work, 1960-2016.	81
2.9.	Alternative Measures of Labor Force Underutilization, 2007-2016.	81
2.v.	Prime-Age Labor Force Participation by Educational Attainment.	83
2.10.	Real Growth in GDP, Private Domestic Final Purchases (PDFP), and Gross Domestic Output (GDO), 2007-2016.	86
2.11.	Compensation and Consumer Spending, 1975-2016.	87
2.12.	Personal Saving Rate, 2000-2016.	87
2.vi.	Growth Rate of Working-Age Population, 1950-2070.	91
2.vii.	Labor Force Participation Rate (LFPR) – Actual vs. Aging Trend, 2007-2016.	92
2.viii.	Real GDP, Average and Current Business-Cycle Peak to Peak.	93
2.ix.	Actual and Projected Labor Force by Age, 2000-2040.	93
2.13.	Consumer Sentiment and Consumer Spending, 1980-2016.	95
2.14.	Household Debt Relative to Disposable Personal Income (DPI), 1995-2016.	95
2.x.	Household Net Worth, 2000-2016.	96
2.xi.	Household Debt Service, 1990-2016.	97
2.xii.	Household Debt and Real Consumer Spending Growth, 1970-2016.	98
2.15.	Consumption and Wealth Relative to Disposable Personal Income (DPI), 1950-2016.	99
2.16.	Year-Round Vacant Housing Units, 2005-2016.	100
2.17.	National House Price Indexes, 2000-2016.	101
2.18.	Delinquent and Underwater Mortgages and Foreclosures, 2009-2016.	102
2.19.	Housing Affordability Index, 1990-2016.	103
2.20.	Single-Family and Multifamily Housing Starts, 2000-2016.	103
2.21.	Composition of Growth in Real Business Fixed Investment (BFI).	105
2.22.	Net Investment as a Share of Capital Stock, 1945-2015.	105
2.23.	Capital Services per Unit of Real Output, Private Business Sector, 1948-2016.	107
2.24.	Inventory-to-Sales Ratio: Manufacturing and Trade, 2000-2016.	107
2.25.	Contribution of Inventory Investment to Real GDP Growth, 2007-2016.	108
2.xiii.	Real Business Fixed Investment, 2007-2016.	109
2.xiv.	Decomposition of the Investment Slump, 2008-2014.	110
2.xv.	Business Fixed Investment – Actual vs. Accelerator Model, 1991-2016.	111
2.26.	Foreign Real GDP and U.S. Real Export Growth.	113
2.27.	Contribution of Net Exports to U.S. GDP Growth, 2000-2016.	114
2.28.	Nonfarm Business Productivity, 2004-2016.	114
2.29.	Contributions to Growth of Labor Productivity, 1953-2015.	116
2.30.	Labor Productivity and Major Components, 1953-2015.	116
2.xvi.	Labor Productivity Growth Slowdown in the G-7.	118
2.xvii.	Capital Deepening in the G-7.	119
2.xviii.	Change in Growth in Components of Productivity in the G-7, 1995-2005 to 2005-2015.	120
2.31.	Nominal Wage Inflation Over Past Year, 2003-2016.	121
2.32.	Consumer Price Inflation, 2012-2016.	121
2.33.	Real Hourly Wage Growth Over Business Cycles (Cycle Peak to Cycle Peak), 1973-2016.	123
2.34.	Change in Real Median Household Income, 1968-2015.	123
2.35.	Growth in Real Household Income by Percentile, 2014-2015.	124
2.36.	Financial Conditions Indices, 2000-2016.	125
2.37.	S&P 500 and VIX, 2015-2016.	126
2.38.	Nominal Long- and Short- Term Interest Rates, 2016.	127
2.39.	CDS Spreads for North American Corporate Debt, 2015-2016.	128

2.40.	Brent Crude Oil Prices, 2015-2016	129
2.41.	IMF World Real GDP Growth Forecast, 2010-2021	131
2.42.	Real Broad Trade-Weighted Dollar, 1973-2016	132
2.43.	Employment and Industrial Production Relative to Trend Given High Export Share, 2014-2016	134
2.44.	Fiscal Breakeven Oil Prices by Country, 2015-2017	138
2.45.	Credit to Nonfinancial (Public and Private), 2000-2016	139
3.1.	Unemployment Rate by Policy Scenario, 2007-2015	159
3.2.	Unemployment Rate by Race, 1970-2016	160
3.3.	Unemployment and Earnings Inequality, 1980-2015	160
3.4.	Earnings Inequality, 2000-2015	161
3.5.	Percent Change in After-Tax Income by Income Percentile: MWP and Recovery Act EITC and CTC Expansion, 2009	163
3.i.	Top 1 Percent Income Share, 2000-2013	164
3.ii.	Top 1 Percent Income Share by Decade, 1980-2013	165
3.6.	Percent Population Without Health Insurance, 1963-2016	167
3.7a.	Uninsured Rate by Age Group, 2010 and 2015	167
3.7b.	Uninsured Rate by Race, 2010 and 2015	168
3.7c.	Uninsured Rate by Family Income as Percent of Federal Poverty Level, 2010 and 2015	168
3.iii.	Percent of Nonelderly Americans Uninsured for at Least One Month, 1997- 2006	172
3.iv.	Percent of Families with Children Claiming the Earned Income Tax Credit, 1989-2006	173
3.8.	Impact of Recovery Act EITC and CTC Improvements on Number of People in Poverty, 2018	174
3.9.	Effective Tax Rates for a Fixed Pre-Tax Income Distribution, 1960-2017	176
3.10.	Percent Change in After-Tax Income by Income Percentile: Changes in Tax Policy Since 2009 Excluding ACA Coverage Provisions, 2017	176
3.11.	Inequality in Market Income, Pre-Tax Income and After-Tax Income, 1979-2013	177
3.v.	Real Value of Federal and State Minimum Wages, 1985-2017	178
3.12.	Percent Change in After-Tax Income by Income Percentile: Changes in Tax Policy Since 2009 and ACA Coverage Provisions, 2017	182
3.13.	Change in Share of After-Tax Income by Income Percentile: Changes in Tax Policy Since 2009 and ACA Coverage Provisions, 2017	182
3.14.	Percent Reduction in Income Inequality Due to Changes in Tax Policy and ACA Coverage Provisions, 2017	183
3.15.	Change in Bottom 99% Share of After-Tax Income for a Fixed Pre-Tax Income Distribution, 1960-2016	185
3.16.	Change in Spending on Major Anti-Inequality Programs by Term, 1968-2016	185
3.17.	Changes in the Distribution of After-Tax Income	188
3.18.	Share of Otherwise-Poor Families Lifted Out of Poverty by the EITC Based on Family Structure, 2012	190
4.1.	Uninsured Rate, 1963-2016	201
4.2.	Share of Income Required to Purchase Employer-Sponsored Plan with Average Premium, 2008	202
4.3.	Health Insurance Coverage Status by Household Income, 2008	203
4.4.	Share of Non-Elderly Individuals With and Offer of Employer-Sponsored Health Insurance in the Family, 2008	205
4.5.	Uninsured Rates by Age, 1997-2016	207
4.i.	Estimated Reduction in Smokers in a Cohort of 18 Year-Olds Due to the 2009 Cigarette Tax Increase	208
4.6.	Health Insurance Coverage Status by Age, 2008	210
4.7.	Uninsured Rates by Age, 1997-2016	211
4.8.	Decline in Uninsured Rate from 2013 to 2015 vs. Level of Uninsured Rate in 2013, by State	214
4.9.	Nonelderly Uninsured Rate by Income, 2013 and 2015	214
4.ii.	Average Annual Change in Benchmark Premium, by Quintile of 2014 Benchmark Premium, 2014-2017	216

4.iii.	Premium for the Benchmark Plan for an Individual Making \$25,000 Per Year, 2017	218
4.iv.	Change in Benchmark Premium vs. Change in Individual Market Enrollment and Claims Costs, by State, 2014-2015	220
4.v.	Change in Benchmark Premium vs. Change in Market place Plan Selections, by Country, 2015-2016	221
4.10.	Share of Workers in Single Coverage Without an Out-of-Pocket Limit, 2006-2016	223
4.11.	Share of Population Not Receiving Needed Medical Care Due to Cost in the Last 12 Months, 1997-2015	226
4.12.	Decline in Share Not Seeing a Doctor Due to Cost vs. Decline in Uninsured rate, by State, 2013-2015	226
4.13.	Increases in Measures of Access to Care vs. Decline in Uninsured Rate, by State, 2013-2015	227
4.vi.	Estimated Proportional Reduction in the Risk of Adverse Health Outcomes Due to Medicaid	230
4.14.	Uncompensated Care as a Share of Hospital Costs, 2011-2015	233
4.15.	Uninsured Rate by Population Group, 2010 and 2015	235
4.16.	Change in Share of After-Tax Income by Income Percentile: Changes in Tax Policy Since 2009 and ACA Coverage Provisions, 2017	236
4.17.	Monthly Gain in Private-Sector Payroll Employment, 2008-2016	237
4.18.	Change in Working-Age Employment to Population Ratio vs. Uninsured Rate in 2013, by State, 2013-2015	239
4.19.	Change in Number of Full-Time and Part-Time Workers Since March 2010, 2010-2016	239
4.20.	Change in Average Weekly Hours vs. Uninsured Rate in 2013, by State, 2013-2015	240
4.21.	Employment Outcomes for Prime Age Adults, by Health Status, 2015	242
4.22.	Health Care Spending as a Share of GDP, 1960-2015	244
4.23.	Life Expectancy at Birth vs. Health Spending, 2009	245
4.24.	Mortality Rate vs. Medicare Spending per Beneficiary, by Hospital Referral Region, 2009	247
4.25.	Medicare Beneficiaries Aligned to ACOs, 2010-2016	254
4.26.	Percentage of Traditional Medicare Payments Tied to Alternative Payment Models, 2010-2019	255
4.27.	Percent of Non-Federal Acute Care Hospitals with Electronic Health Records, 2008-2015	260
4.28.	Health Care Price Inflation vs. Overall Inflation, 1960-2016	263
4.29.	Trends in Real Health Care Prices, by Service, 1960-2016	264
4.30.	Trends in Real Prices for General Medical and Surgical Hospitals, by Payer, 2000-2016	265
4.31.	Real Per Enrollee Spending Growth, By Payer, 2000-2015	265
4.32.	Real Per Enrollee Health Care Spending by Service and Payer, 2000-2015	266
4.33.	Nominal Per Enrollee Health Care Spending Growth, 2000-2016	268
4.34.	Growth in Real Costs for Employer-Based Family Coverage, 2000-2016	269
4.35.	Growth in Real Per Capita National Health Expenditures, 1961-2015	269
4.36.	Unemployment Rate, 2006-2016	274
4.37.	Average Age in Population, 2000-2016	276
4.38.	Effects of Changes in the Age Distribution on Health Care Spending Growth, by Payer, 2001-2016	276
4.39.	Out-of-Pocket Share in Employer Coverage, 2000-2015	278
4.40.	Average Real Deductible in Employer-Based Single Coverage, 2002-2016	279
4.41.	Real Per-Enrollee Prescription Drug Spending in Private Insurance, 2000-2015	281
4.42.	Cumulative Percent Change in Rate of Hospital-Acquired Conditions Since 2010, 2010-2015	287
4.43.	Medicare 30-Day, All-Condition Hospital Readmission Rate, 2008-2016	288
4.44.	Projected National Health Expenditures, 2010-2019	290
4.45.	Average Nominal Premium for Employer-Based Family Coverage, 2010-2016	292

4.46.	Premiums and Cost Sharing for Medicare Beneficiaries Under 2009 and 2016 Trustees Projections	293
4.47.	Deficit Reduction Due to the Affordable Care Act, 2016–2035	296
4.48.	Forecasted Year of Medicare Trust Fund Exhaustion, 2000-2016	297
5.1.	College Earnings Premium Over Time	300
5.2.	Present Value of Added Lifetime Earnings vs. Total Tuition	303
5.3.	Likelihood of Working by Educational Attainment, 2015	304
5.4.	Earnings by Age and Educational Attainment	307
5.5.	Variation in Earnings by Education Attainment	309
5.6.	Annual Percent Change in State Funding for Higher Education and Public Tuition and Fees Over Time	314
5.7.	Pell Expenditures Over Time	314
5.8.	Growth in the Cost of Attendance and Net Price between 2009 and 2017	316
5.9.	Promise Programs Across the Country	318
5.10.	Median Annual Earnings by Debt Quintile	323
5.11.	Share of Undergraduate Borrowers Who Default by Year 3 by Loan Size, 2011 Repayment Cohort	323
5.12.	Cohort Default Rates Over Time	324
5.13.	Repayment Distribution by Repayment Plan	326
5.14.	Borrowers in Income Driven Repayment Over Time	328
5.15.	Average Family Income by Repayment Type	328
5.16.	Size of Outstanding Loan Balance by Repayment Plan	329
5.17.	Average Monthly Payment by Sector and Repayment Plan, 2011 Repayment Cohort	331
5.18.	Distribution of Key Outcome Measures at 2 and 4 Year Schools	333
5.19.	Scorecard Usage by State	333
5.20.	Earnings by Family Income at 4 Year Schools	335
5.21.	FAFSA Tax Filing Status during Initial Applications, 2014-2015	338
5.i.	College Enrollment by Sector Over Time	342
5.ii.	Number of Institutions by Sector Over Time	343
5.22.	Relationship Between Undergraduate Default and Sector by Completion Status, 2011 Repayment Cohort	344
5.23.	Gainful Employment Earnings Outcomes for Individuals who Completed an Undergraduate Certificate	345
6.i.	Financial Insurance and Services: Value-Added, 1970-2016	355
6.ii.	Growth of Financial Assets, 1952-2016	356
6.iii.	Families with Direct or Indirect Holdings of Stock, 1989-2013	358
6.1.	Household Net Worth in the Great Depression and Great Recession	362
6.2.	Mortgage Originations by Product Type, 2000-2015	363
6.3.	Subprime Mortgage Originations, 2003-2016	364
6.4.	Case-Shiller Home Price Index, Seasonally Adjusted, 1990-2016	365
6.5.	Household Credit as a Percent of Disposable Personal Income, 1990-2016	365
6.6.	Growth of Shadow Banking, 1990-2014	366
6.7.	Global OTC Derivative Market, 1998-2016	367
6.iv.	Top 5 Banks as Share of GDP in 2015	371
6.v.	Concentration of Top 5 Banks, 2005-2014	372
6.vi.	Systemic Importance Score 2013 Average of 30 G-SIBS	373
6.vii.	Average SRISK of Top Four Banks, 2005-2016	374
6.8.	Tier 1 Common Equity Ratios for U.S. Banks by Bank Size, 2001-2016	376
6.9.	Liquidity Ratio for Largest U.S. Bank Holding Companies, 1995-2015	378
6.10.	Selected High Quality Liquid Assets at BHCs, 2010-2015	378
6.11.	Losses for Large U.S. Banks, 2007-2011	380
6.12.	Average Risk-Weighted Assets, Largest U.S. BHCs, 2000-2016	380
6.viii.	Average Loan Growth of Banking Institutions, by Asset Size, 1995-2015	382
6.ix.	Return on Assets of Banking Institutions with Less than \$100M Assets, by Age	383
6.13.	Repo and Reverse Repo, 1995-2015	387
6.14.	Commercial Paper, 2000-2016	387
6.15.	Private Funds Reporting to Form PF, 2013-2016	389
6.16.	Weighted-Average Maturity of MMFs, 2012-2016	391
6.17.	Measures of Joint Distress of Largest U.S. BHCs, 2005-2016	391

6.18.	Systemic Risk (SRISK) 2005-2016	393
6.x.	TBTF Premium, United States, 1990-2012	396
6.xi.	TBTF Premium for GSIBs, CDS Estimation, 2005-2014	397
6.19.	TED Spread, 2005-2016	400
6.20.	Global OTC Derivatives Market, 1998-2016	402
6.21.	Interest Rate Derivative Compression Volume, 2003-2015	404
6.xii.	U.S. Retirement Assets by Type, 1978-2015	410
6.22.	International Financial Regulation: Implementation of G20 Financial Regulatory Reforms.	414
6.23.	S&P 500, 2003-2016	417
6.24.	VIX, 1990-2016	417
6.25.	Fixed Income Implied Volatility, 1990-2016	418
6.26.	Mortgage Originations, 1995-2016	418
6.27.	Mortgage Delinquency and Foreclosure, 2000-2016	419
6.28.	U.S. Corporate Bond Issuance, 2000-2016	419
7.1.	Billion-Dollar Event Types, 1980-2015	427
7.2.	Greenhouse Gas Emissions by Type and Sector in 2014	433
7.3.	Clean Power Plan Projected Carbon Dioxide Emissions	437
7.4.	Corporate Average Fuel Economy Standards and Performance, 1978-2025	442
7.5.	GDP and Greenhouse Gas and Carbon Dioxide Emissions, 2000-2015	451
7.6.	Electric Power Sector Carbon Dioxide Emissions, 1990-2015	451
7.7.	Energy Intensity of Real U.S. GDP, 1973-2015	452
7.8.	Carbon Emissions and Energy Consumption per Real U.S. GDP, 2008-2015 ...	452
7.9.	Energy Intensity Projections and Actual, 2003-2015	453
7.10.	U.S. Petroleum Consumption, 1949-2015	454
7.11.	Total U.S. Petroleum Consumption, 2000-2025	454
7.12.	Energy Intensity Transportation Sector, 2003-2015	456
7.13.	Energy Intensity Residential Sector, 2003-2015	456
7.14a.	Energy Intensity Electric Sector, 2003-2015	457
7.14b.	Energy Intensity Industrial Sector, 2003-2015	457
7.14c.	Energy Intensity Commercial Sector, 2003-2015	458
7.15a.	Carbon Intensity Projections and Actual, 2003-2015	459
7.15b.	Carbon Emissions per GDP Projections and Actual, 2003-2015	459
7.16.	U.S. Energy Consumption by Source, 2008-2015	460
7.17.	Coal and Natural Gas Share of Total U.S. Electricity Generation, 2008-2015	460
7.18.	Monthly Share of Non-Hydro Renewables in Net Electric Power Generation, 2000-2015	461
7.19.	Electricity Generation from Wind and Solar, 2008-2015	461
7.20.	U.S. Non-Hydro Renewable Energy Electric Power Sector Installed Capacity, 2008-2015	463
7.21.	Change in Costs of Onshore Wind and Solar (Unsubsidized), 2008-2014	464
7.22.	Total System LCOE Comparison Across Generation Technologies (Unsubsidized), 2020 Forecast	464
7.23.	Decomposition of Emission Reductions from Power Sector, 2008-2015	466
7.24.	Growth Rates of GDP, Energy Intensity and Carbon Intensity, 2008-2015	467
7.25.	Decomposition of Total CO2 Emission Reductions, 2008-2015	469
7.26.	Sectoral Decomposition of Total CO2 Emission Reductions, 2008-2015	470
7.27.	U.S. Net Emissions based on Current Measures, 1990-2025	473
7.28.	U.S. Net Emissions, 1990-2025	473
7.i.	Net Load for March 31	480

TABLES

1.i.	Revisions to Crisis-Era Output Data	32
1.ii.	Revisions to Crisis-Era Employment Data	33
2.i.	Optimal Weighting for Household Employment vs. Payroll Employment	89
2.ii.	Optimal Weighting for Payroll Employment vs. Gross Domestic Output	90
2.1.	Administration Economic Forecast, 2015-2027	142

2.2.	Supply-Side Components of Actual and Potential Real Output Growth, 1953-2027.....	147
3.1.	Timeline of Select Recovery, Health, and Tax Legislation, 2009-2015.....	155
3.i.	Measures of Inequality, 1980 and Most Recent Available.....	157
6.i.	Sources of Investment Advice.....	411
7.i.	Social Cost of CO ₂ , 2010-2050 (in 2007 Dollars Per Metric Ton of CO ₂).....	439

BOXES

Box 1-1:	Revisions to Crisis-Era Data.....	32
Box 1-2:	The Manufacturing Sector.....	38
Box 1-3:	The Administration's Record in the Technology Sector.....	48
Box 1-4:	Administration Actions in the International Economy.....	54
Box 2-1:	Challenges in the State and Local Sector.....	72
Box 2-2:	Oil Prices and Employment in Related Industries.....	78
Box 2-3:	Male Prime-Age Labor Force Participation.....	82
Box 2-4:	Optimal Weighting for Combining Measures of Economic Activity.....	88
Box 2-5:	The Economics of Aging.....	91
Box 2-6:	Household Deleveraging and Consumption Growth.....	96
Box 2-7:	Explanations for the Recent Performance of Business Fixed Investment...	109
Box 2-8:	Productivity Among the Advanced Economies – Explanations and Prospects.....	118
Box 2-9:	Policy Proposals to Raise Output over the Next-Ten Years.....	144
Box 3-1:	Trends in Inequality.....	156
Box 3-2:	Income Inequality and the Business Cycle.....	164
Box 3-3:	Safety Net Policies as Insurance.....	172
Box 3-4:	Additional Actions to Make the Economy Work for All Americans.....	178
Box 4-1:	Public Health Benefits of CHIPRA.....	208
Box 4-2:	Dynamics in the Individual Health Insurance Market.....	215
Box 4-3:	Interpreting Results from the Oregon Health Insurance Experiment.....	229
Box 5-1:	Anti-Poverty Efforts and Educational Attainment.....	311
Box 5-2:	Federal Investments in the K-12 Education during the Recession.....	317
Box 5-3:	Expansions of Early Education Programs.....	320
Box 5-4:	Improving Information to Drive Evidence-Based Policies.....	336
Box 5-5:	Making Sure Students Enter College Well-Prepared.....	339
Box 5-6:	The Rise of the For-Profit Sector.....	342
Box 6-1:	Financialization of the U.S. Economy.....	354
Box 6-2:	A Cross-Country Comparison of Bank Size.....	370
Box 6-3:	The Performance of Community Banks.....	381
Box 6-4:	Have we ended “Too Big To Fail”?.....	394
Box 6-5:	Addressing the Problem of Conflicted Investment Advice for Retirement Savings.....	409
Box 6-6:	The JOBS Act.....	415
Box 7-1:	Quantifying the Benefits of Avoided Carbon Emissions.....	439
Box 7-2:	Investing in Clean Energy Research and Development.....	443
Box 7-3:	Building Resilience to Current and Future Climate Change Impacts.....	446
Box 7-4:	Supporting Increased Penetration of Variable Energy with Smart Markets and Storage.....	480